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TRANSPLANT NURSING ORAL- CLINICAL

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REDUCING OUTPATIENT BMT CLINIC VISIT TIMES

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As our health care environment faces increasing costs, high demands, and shifts towards outpatient care, facilities are forced to reassess their operations. To manage a successful clinic, a focus must be placed on efficient yet safe patient care delivery. Patient satisfaction plays an important part of this reassessment. In our pediatric BMT clinic, patients receive a variety of clinical care support including f/u exams, lab draws, central line care, short infusion therapies and new patient consults. Literature review finds that most research has focused on studying scheduling options to reduce visit times in the outpatient setting. Our improvement project was focused on reducing overall patient visit time through changes that impacted patient flow. An Improvement Science approach was initiated by staff and initially they looked at average clinic visit times (time of arrival to time of discharge) for new and follow-up visits in the BMT clinic from January - March, 2010. The staff also looked at the past parent satisfaction survey data from our outpatient pediatric BMT clinic which revealed that 65% of families felt wait times in exam rooms were not acceptable. The overall aim of this project focused on decreasing average clinic visit time for new and follow-up BMT patients by 25%. Key drivers were identified as accurately scheduled provider templates, adequate staffing, clear role responsibilities/team work, accurate communication handoff and timely discharge documentation. Key interventions included placing an APN in the clinic provider template, developing a Flow Lead RN role with triage and implementing the pod nursing care delivery system. Visit time data was extrapolated and placed on a run chart to show improvements made throughout the last 6 months. Run chart data showed a shift in the mean and a reduction in overall visit time for new and follow-up patients. Median new visits were reduced from 241 to 221 minutes. The median follow-up visits were reduced from 209 to 167 minutes. Families, staff and physicians have commented positively on the interventions. Consistent handoffs of care/communication have led to a safer environment for patients. We are continuing to test, implement and evaluate changes to reduce visit time and increase family satisfaction as we work to meet the goals set with this improvement project.

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PREVENTION OF DMSO-RELATED NAUSEA AND VOMITING BY PROPHYLACTIC ADMINISTRATION OF ONDANSETRON FOR PATIENTS RECEIVING AUTOLOGOUS CRYOPRESERVED PERIPHERAL BLOOD STEM CELLS

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Background: DMSO (dimethyl sulfoxide) is frequently used as a cryopreservative for peripheral blood stem cells (PBSCs). Common side effects of this chemical include nausea, vomiting, abdominal cramping, coughing and throat irritation. A comprehensive literature search using PubMed and CINAHL failed to reveal any studies investigating the benefit of antiemetics for preventing or reducing DMSO-induced nausea or vomiting.

Study design: A pilot study was conducted to determine whether a single 16mg intravenous dose of ondansetron could decrease the degree of nausea and episodes of emesis in patients receiving autologous PBSCs cryopreserved in DMSO. Fifty patients scheduled to receive an autologous transplant in an ambulatory NCI-designated comprehensive cancer center were enrolled. Nausea was rated using the MAASC nausea scale (0-10) at the following time points: upon arrival to the Infusion Room, prior to the ondansetron administration, prior to each cryopreserved bag, and at the end of the last bag. Episodes of emesis were documented. Results would be compared to an (unpublished) study examining the side effects of DMSO on 60 autologous HSCT patients previously conducted by this investigator.

Results: Forty-nine patients were evaluable. Compared to the historical control group, there were no statistically significant differences in nausea and vomiting when examining age, disease, gender, and chemotherapy regimens. There was no correlation between infusion rate and nausea scores, or between individual nausea scores and those patients who vomited. A trend ($p = 0.05$) was noted for increased nausea scores as the number of bags increased.

Discussion: Only 9/49 (18%) of the study patients had nausea ($p < .0001$) compared to 58% from the control group. In addition, only 9/49 (18%) vomited compared to 33% in the control group.

Conclusion: Although this was a small, non-blinded pilot study, the results suggest patients who received a single dose of intravenous ondansetron had significantly decreased nausea and vomiting during cryopreserved stem cell infusions. A larger, double-blinded study is warranted.

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END-OF-LIFE AND PALLIATIVE CARE IN BMT: NURSES NEED EDUCATION AND SUPPORT

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Recently, the Blood and Marrow Transplant (BMT) program at our NCI-designated Cancer Center increased its inpatient capacity by 80% and its nursing staff by 50%. Concurrently, treatment protocols expanded and patients with co-morbidities increased. These factors have resulted in increased morbidity, mortality, and length of stay and increased compassion fatigue among old and new BMT nurses.

Two new BMT nurses expressed concern regarding peers' compassion fatigue and a desire to educate about palliative care (PC) and end of life (EOL). Partnering with the Clinical Nurse Specialist (CNS) and Patient Care Manager, staff nurses initiated an EOL/PC Committee with the goals of staff education and support. Education has included journal article review and guests such as the Ethics Committee Chair, Hospice Liaisons, and Palliative Care Nurse Experts. Members are encouraged to obtain ELNEC (End-of-Life Nursing Education Consortium) or similar training. Attendees receive support through an open forum at each monthly meeting to share concerns about patient deaths, life-threatening complications or goals of care. Meeting discussions are facilitated by a CNS certified in Hospice and Palliative Care, ELNEC educators, hospice nurses, social worker, and Psychiatric CNS. Discussions focus on expression of emotions, problem-solving and nurse's role at EOL.

EOL/PC Committee has grown from 4 to 27% of unit staff since April 2009. Beyond direct education and support at meetings, issues raised have resulted in care improvement initiatives. Outcomes include peer education regarding post-mortem care, collaboration with Medical Leadership to improve communication about futile care and presentation at Grand Rounds to elevate awareness of EOL issues. Ongoing initiatives are to develop a tool to assess futility of care, to identify a Palliative Care Resource Nurse for each shift and to enhance nurse's role in completion of Advance Directives.

The unit-based BMT EOL/PC Committee has successfully raised awareness and created a forum for discussion of PC and EOL issues. Though we all strive for cure, we need to acknowledge and support the reality that all transplants are not successful and are associated with emotionally and physically devastating complications for the patient, their family and BMT staff. On our unit, the BMT EOL/PC Committee is a safe venue for nursing staff to acknowledge this reality as well as an arena to improve the PC and EOL that we provide.